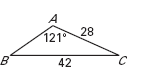
**HONORS Extended HW Week 21 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Law of Sines & Law of Cosines Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pr: \_\_\_\_\_\_**

**Law of Sines:**

* Log into Kahn Academy [make sure you log in with the same email you registered with!]
* Watch the video “**Proof: Law of Sines**”
* <http://www.khanacademy.org/video/proof--law-of-sines?topic=trigonometry-1>
* Answer the questions below.

1. Kahn says that if the third angle of the triangle was , then . Draw a picture below and prove that  or .
2. Solve  using the law of sines [find each side length and each angle].  
   

**Law of Cosines:**

* Watch the video “**Law of cosines**”
* <http://www.khanacademy.org/video/law-of-cosines?topic=trigonometry-1>
* Answer the questions on the back.

1. Prove the law of cosines for the triangle below.

x

y

z

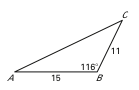
j

k



a

4) Solve  using the law of cosines [find each side length and each angle].



5) Why did Kahn draw an altitude in each video? What is an altitude? Why is this important in solving a triangle (finding all of it’s sides and interior angles)?